

# Understanding Cancer

**A SERIES OF SIMPLE EDUCATIONAL VIDEOS  
FOR THE GENERAL PUBLIC**



***By Dr Hafsa Waseela Abbas***

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# Understanding Cancer

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*Part 6: What is clinical research?*

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***What do you think clinical  
research is?***

***What is RESEARCH?***



**When researching for  
something...  
you need to have an idea of  
what you looking for...**

**Research is the ability  
to explore what might  
happen based on  
current understanding,  
look at data and report  
findings.**

RESEARCH



# What are clinical trials?

Research studies that involve people.



# Two types of clinical trials:

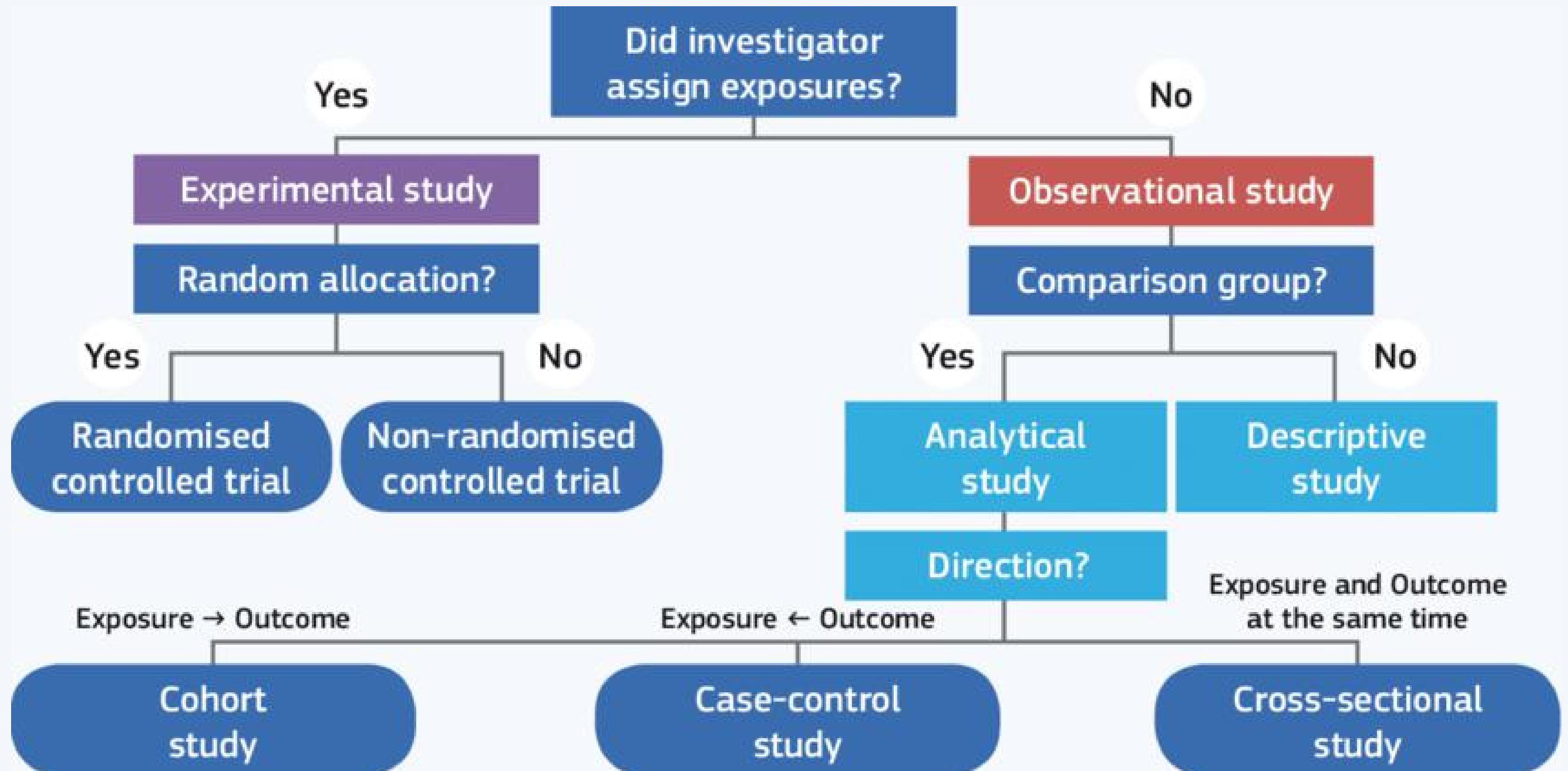
## *Interventional trials*

It aims to find out more about a specific intervention or type of treatment.

They're placed in groups to compare results.

## *Observational studies*

It aims to find out about what happens to people in different situations. They are not added to treatment groups.





## **Feasibility study**

**Aims to find out whether patients and doctors are happy to take part in the study and discuss collected information**

## **Pilot study**

**Aims to test all parts of the study and may help answer the research question.**

**Pilot and feasibility studies are small studies done before a large clinical trial takes place.**

# **EVERY CLINICAL TRIAL requires approval for ethics.**

*Values?*

*Is it right or wrong?*

*Is it beneficial?*



**Why do we need clinical  
trials?**



# Why do we need clinical trials?

To look for new ways on how disease can be:

**TREATED.**

**PREVENTED.**

**RELIEVE SYMPTOMS**

**BETTER UNDERSTANDING OF THE DISEASE**

# The Participant.

Before enrolling onto the study,  
they will get a:

*Interview*

*Participation Information sheet*

*Consent form*

*Agreement*

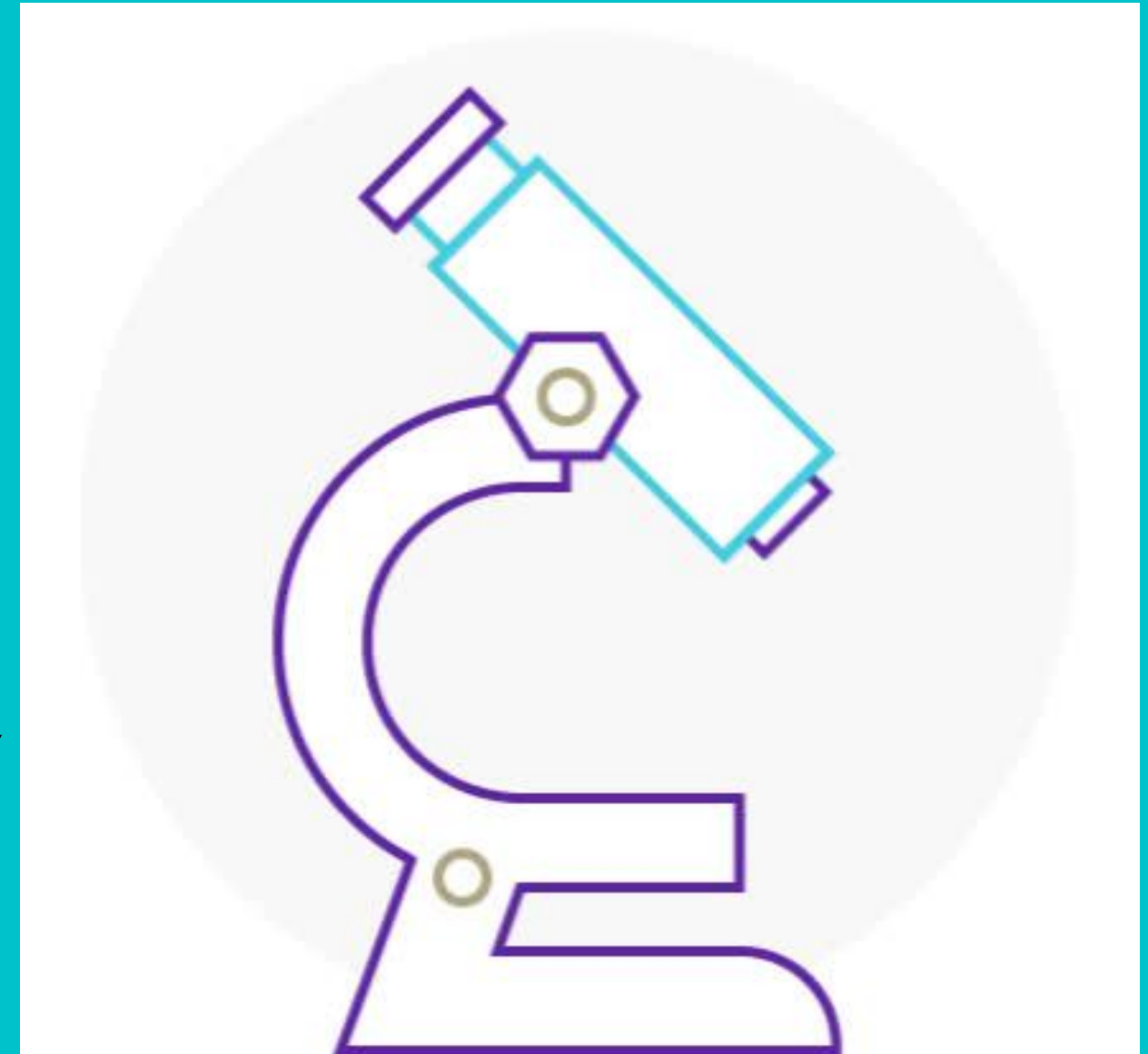
**They can be a healthy volunteer or a patient**



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**Two stages in a  
clinical trial:**

**PRE-CLINICAL STUDY**  
**CLINICAL STUDY**





# **What happens in a pre-clinical study?**

Using models, the aim is to see if there are any side effects and find out the level of efficacy.

**Efficacy is the maximum ability of a drug to produce a result despite the dose.**

# What happens in a pre-clinical study?

In a laboratory, cells, tissues, rodents and other animal are used as models for experiments. Computer models.



# **What happens in a pre-clinical study?**



**Many fail because they damage cells or do not work well.**



# **What happens in the clinical testing?**

This may involve animals and humans..

## ***Animals***

- In the UK, it is illegal to test tobacco and make-up products on animals.
- A known amount is given to animals before monitoring them for side-effects.

# **What happens in the clinical testing?**

## ***Humans***

A healthy volunteer is recruited to determine whether the medication is:

**Safe? Effective?**

# What happens in the clinical

## testing? *Humans*



A low dose is given before increasing it to the aimed dose.

Once passed, the medication is then given to patients with the disease.

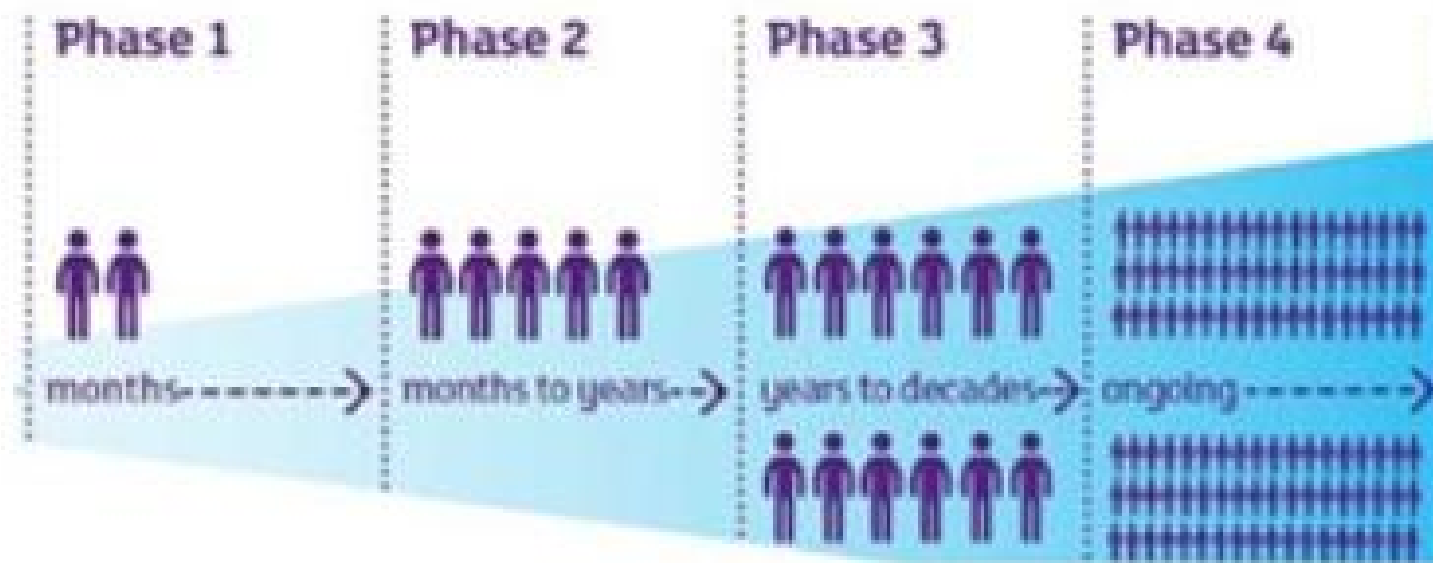


# Factors that affect clinical trials:

*Safety*  
*Effectiveness*  
*Correct Dose*



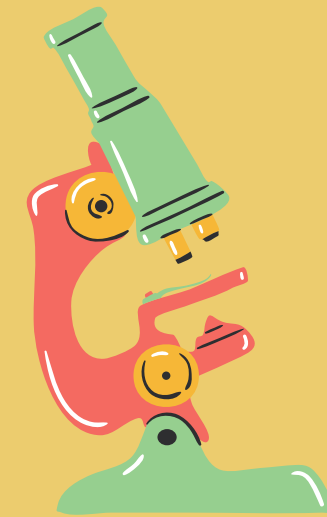
# What are the phases?



Source: The Hillingdon Hospitals NHS Foundation Trust (2021)

Phase	Purpose
I	Testing an experimental drug in small group of people (approx. 20-100) to evaluate safety, possible side effects, and to determine drug use and delivery.
II	Assessment of the safety and efficacy of an experimental treatment in more people than in Phase I (approx. 100-300).
III	A comparison of the experimental drug against a placebo or standard treatment to evaluate safety, efficacy and effectiveness in patients with specific diseases (approx. 300 - 3000).
IV	After approval has been given, the drug's effectiveness and safety is monitored by public use.

**Without research, progress  
cannot be made in  
understanding cancer and  
help improve techniques and  
treatment.**



**A number of cancer charities,  
research councils, hospitals,  
pharmaceutical companies  
and universities are heavily  
involved in research in  
cancer and other diseases.**



# Scientists identify ‘hugely exciting’ new drugs that could lead to cancer treatments

Scientists at the Institute of Cancer Research and pharmaceutical company Artios have identified a new class of medicine that could lead to treatments of even drug-resistant cancers, **Joanna Taylor** reports

Thursday 17 June 2021 16:00 | [comments](#)





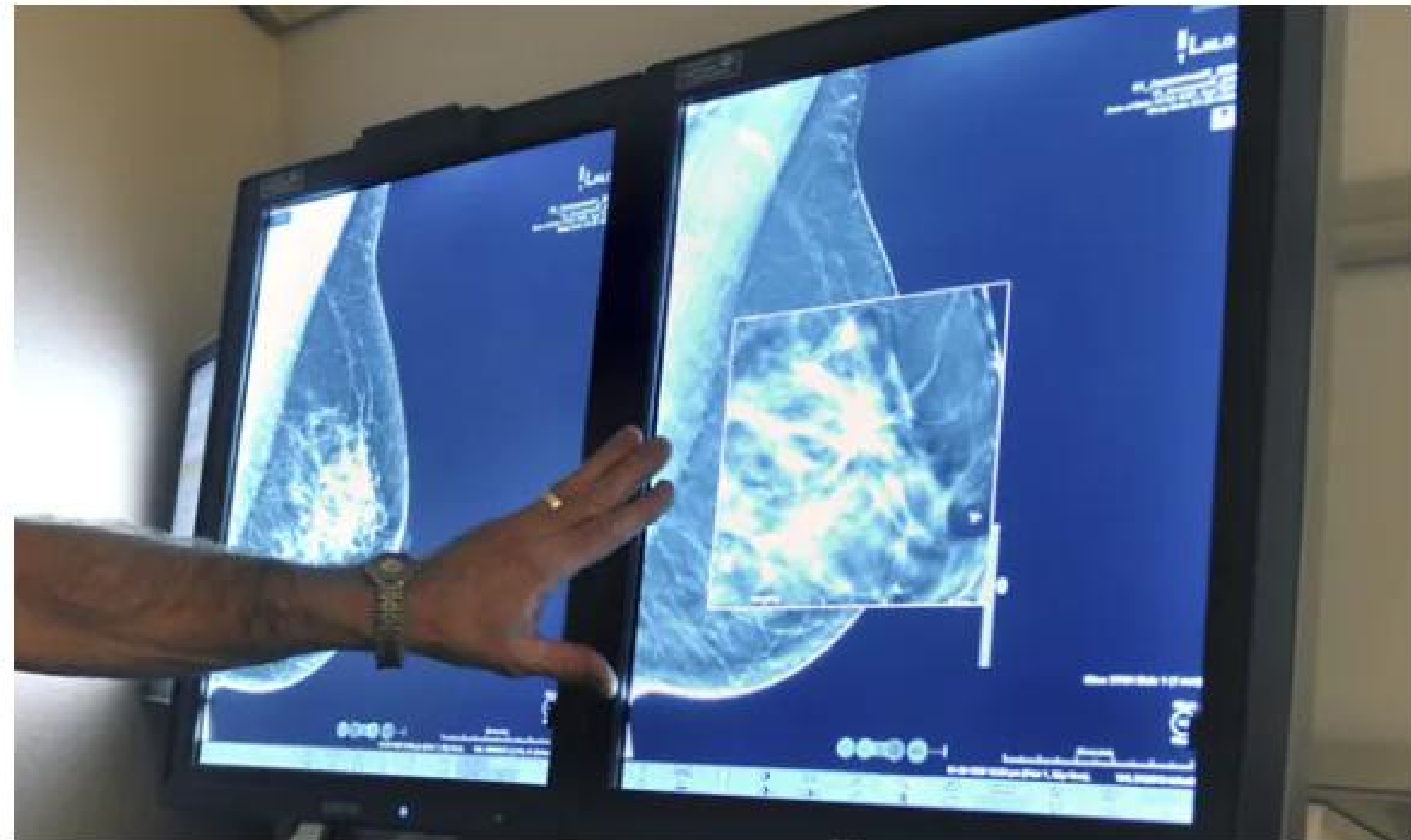
# More detailed MRI to detect early breast cancer begins UK trials

**Exclusive: multiparametric MRI designed to be more comfortable and effective in early detection**

- **New breast cancer scan is designed with women's comfort in mind**

**Linda Geddes** *Science correspondent*

Fri 9 Jul 2021 12.29 BST



▲ A doctor examines a mammogram image. Mammograms are less effective in younger women with more fibrous breast tissue. Photograph: Torin Halsey/AP

A new, more comfortable way of detecting breast cancer, which could enable

**Treatments**

08 Jul 2021

# Dr Matthew Hobbs: five breakthroughs that could change the way we diagnose and treat prostate cancer.

Our Director of Research reflects on exciting research news - from a new way to target cancer cells to the permanent approval of a life-extending drug.



# Scientists developing urine and blood tests to detect brain tumours

Category: [News](#)



July 23, 2021



Cancer Research UK



0 comments



4 minute read



# First treatment approved in England for advanced bile duct cancer

Category: News



July 22, 2021



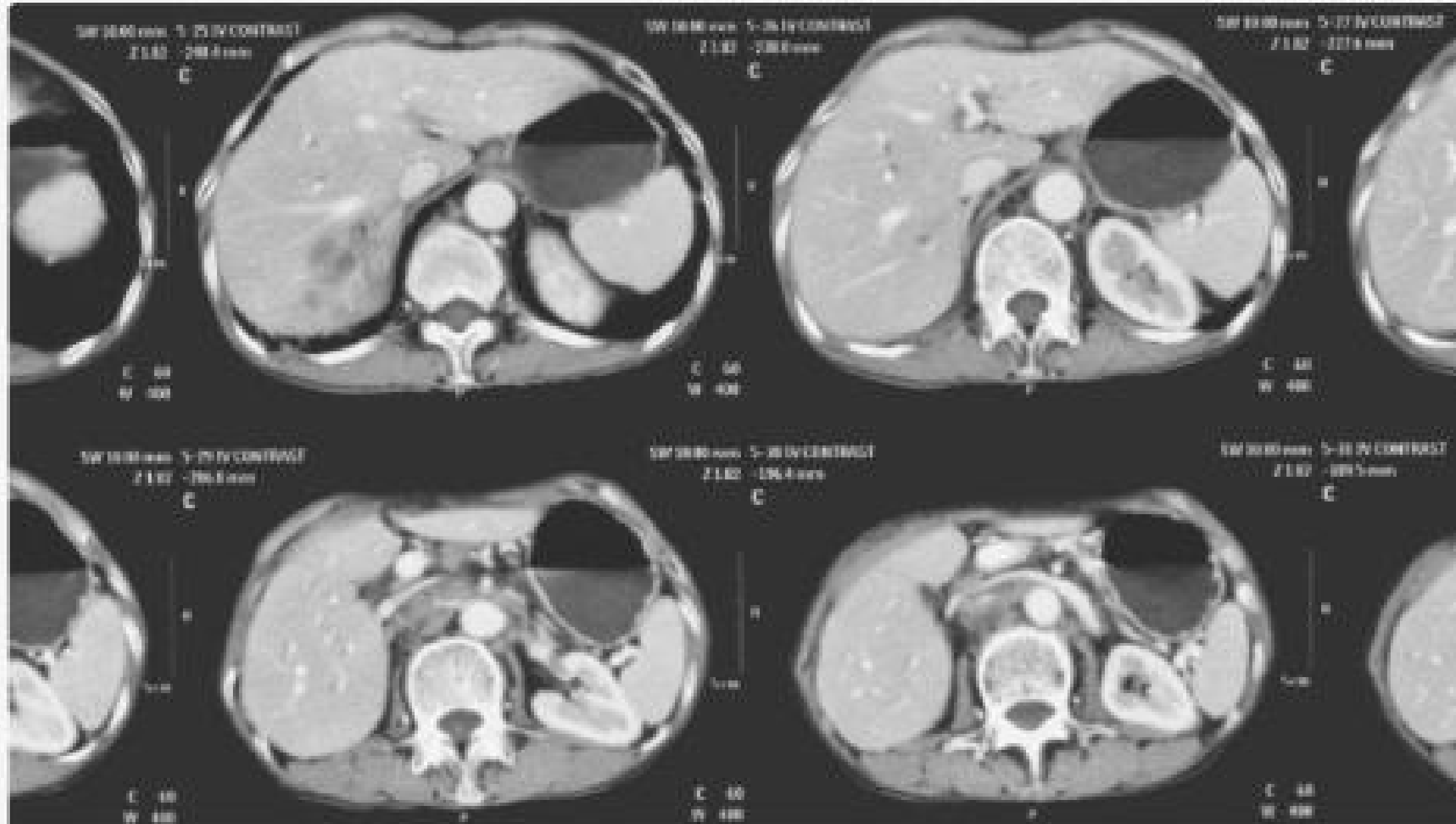
Cancer Research UK



0 comments



3 minute read



A CT scan showing a case of cholangiocarcinoma

The drug [pemigatinib \(Pemazyre\)](#) will now be an option for people with a rare type of bile duct cancer that has continued to advance or spread after initial chemotherapy.

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## Drug may help more women survive hereditary breast cancer

International trials of olaparib were stopped early as benefits of 'groundbreaking' drug became clear

**Sarah Boseley** *Health editor*

Thu 3 Jun 2021 22:00 BST



**The Guardian Labs**

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**Together, we can help make a  
research difference.**



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*Part 7: Diagnosis - Physical examination*

**UPCOMING VIDEO RELEASING SOON!**

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# Acknowledgements

**The Guardian  
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***Thank  
you!***